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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Webb

Serial No.: 09/772,723

Examiner: Carolyn L. Smith

Filing Date: January 29, 2001

Group Art Unit: 1631

Title: CHEMICAL ARRAY FABRICATION WITH IDENTITY MAP

COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria VA 22313-1450

TRANSMITTAL OF REPLY BRIEF

Sir:

Transmitted herewith is the Reply Brief with respect to the Examiner's Answer mailed on 03-07-2006. This Reply Brief is being filed pursuant to 37 CFR 1.193(b) within two months of the date of the Examiner's Answer.

(Note: Extensions of time are not allowed under 37 CFR 1.136(a))

(Note: Failure to file a Reply Brief will result in dismissal of the Appeal as to the claims made subject to an expressly stated new grounds of rejection.)

No fee is required for filing of this Reply Brief.

If any fees are required please charge Deposit Account 50-1078.

Respectfully submitted,

Webb

By

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<b>REPLY BRIEF</b>  Address to: Box DAC Assistant Commissioner for Patents Alexandria, VA 22313-1450	Attorney Docket Confirmation No.	10010016-1 1312
	First Named Inventor	Webb
	Application Number	09/772,723
	Filing Date	January 29, 2001
	Group Art Unit	1631
	Examiner Name	Carolyn Smith
	Title	<i>Chemical Array Fabrication with Identity Map</i>

Sir:

This Reply Brief is in response to the Examiner's Answer mailed on March 7, 2006.

Please charge any required fees to Deposit Account No. 50-1078, order number 10010016-1.

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### **REPLY BRIEF**

In this Reply Brief, the Appellant addresses comments made in the Examiner's Answer. The Examiner has raised no new grounds for rejection. The Appellant notes that all arguments presented in the prior Appeal Brief still apply with equal force, but are not reiterated in full herein solely in the interest of brevity and for the convenience of the Board.

The comments of the Appellant with regard to certain of the Examiner's assertions in the Examiner's Answer are provided below.

#### ***(4) Status of Amendments After Final***

The Examiner has correctly pointed out that the entry of the claim amendments filed subsequent to the Final Rejection.

#### ***(6) Grounds of Rejection to be Reviewed on Appeal***

The Examiner has withdrawn the following grounds of rejection:

- The rejection of Claims 1-14 and 45-52 under 35 U.S.C. § 112, first paragraph.
- The rejection of Claims 1-14 and 45-53 under 35 U.S.C. § 112, second paragraph.

As such, the above rejections are no longer presented for review on appeal.

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**(10) Response to Argument**

I. Claim 54 stands rejected under 35 U.S.C. § 112, first paragraph for containing new matter.

The Examiner continues to maintain that there is no support in the originally filed disclosure for the limitation reciting "wherein each of said vessels is marked with a unique identifier that is not composition information." The Examiner states the following:

Appellant provides examples of identifiers found in the specification (i.e. Table 1 and "such as" terminology found in the specification). While these are examples of identifiers, they fail to provide written support that the unique identifier cannot be compositional information. (Examiner's Answer, p. 11)

As such, the Examiner's new matter rejection hinges on the interpretation that the unique identifier as recited in Claim 54 may also include compositional information.

However, as described in detail in the Appeal Brief, the unique identifier is an identifying mark which enables one to identify the original source vessel of a biopolymer deposited on the surface of an array.

For example, the Appellant provides an exemplary embodiment of an identity map in Table 1 below.

**TABLE 1**

Vessel Identifier (tray, column, row)	Feature Identifier (column, row) with reference to upper left hand corner
1A1	A1
1A2	A2
1A3	A3
1C1	1C1
1C2	1C2

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Contrary to the Examiner's assertion, it is clear that the unique identifier is an identifying mark with respect to the specific location of a specific vessel, i.e., "tray number, column number, row number."

The instant specification teaches that once the identity map has been obtained, additional array layout information, such as the sequence identity of each polynucleotide in each well and hence the sequence identity of polynucleotides at array features may also be obtained. As such, the present application clearly teaches that the polynucleotide sequences of each vessel, i.e. compositional information, are a completely separate entity from the identity map. Therefore, the unique identifier is not composition information from that vessel as continuously asserted by the Examiner.

Furthermore, in the Examiner's Answer, the Examiner repeatedly asserts that negative limitations must have written support and refuses to find the above support persuasive.

As such, it appears that the Examiner is requiring the presence of the exact words of the claim in the specification. However, the Examiner does not cite to any relevant authority, e.g., any sections in the MPEP or relevant case law, which support her reasoning.

In fact, the MPEP teaches with respect to new matter:

While there is no *in haec verba* requirement, newly added claim limitations must be supported in the specification through express, implicit, or inherent disclosure.<sup>1</sup> Moreover, a negative limitation must have basis in the original disclosure. However, a lack of literal basis in the specification is not sufficient to establish a *prima facie* case for lack of descriptive support.<sup>2</sup>

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<sup>1</sup> MPEP § 2163:

<sup>2</sup> MPEP § 2173.05(I)

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As noted above, the instant specification does not require "literal support" for the limitation reciting "wherein each of said vessels is marked with a unique identifier that is not composition information" to comply with the written description requirement. The disclosure need only convey with reasonable clarity to those skilled in the art that the inventor was in possession of the invention.<sup>3</sup>

For Example in *Ex parte Parks*, the claims were rejected for containing new matter for reciting "such decomposition being conducted in the absence of a catalyst." The Board of Appeals stated that the negative limitation did not constitute new matter and reversed the rejection.

In the situation before us, it cannot be said that the originally-filed disclosure would not have conveyed to one having ordinary skill in the art that appellants had possession of the concept of conducting the decomposition step generating nitric acid in the absence of a catalyst. See, for example, column 5 of the '562 patent, first paragraph, wherein FIG. 4 is discussed. Pyrolysis temperatures of between 600 degrees C and 700 degrees C, and above 700 degrees C were employed to achieve conversion of chemically bound nitrogen to nitric oxide. Smooth conversion was obtained above 700 degrees C, while the optimum conversion was found to occur above 900 degrees C. Throughout the discussion which would seem to cry out for a catalyst if one were used, no mention is made of a catalyst.<sup>4</sup>

Similarly, if the Appellant had intended to claim an identifier which included compositional information, he would have readily mentioned it in the specification and Examples. As such, one skilled in the art from reading the instant specification would understand that the unique identifier is an identifying mark with respect to the specific location of a specific vessel, i.e., "tray number, column number, row number."

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3 MPEP§ 2163.02

4 1993 Pat. App. LEXIS 27, 6-7 (Pat. App. 1993)

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Therefore, the Appellant submits that there is full support for the limitation "the vessel is marked with an identifier that is not composition information." Accordingly, this rejection should be reversed.

III. Claims 1-14 and 45-54 stand rejected under 35 U.S.C. 103(a) as being obvious over Hunkapiller in view of Zeleny, Brown, Anderson, Shakib and Balaban.

In maintaining the obviousness rejection, the Examiner continues to rely on Zeleny to provide the elements of assigning a unique identifier to each member of a plurality of individual vessels and saving in a memory a map of the identity of the vessels made up of a collection of unique identifiers.

According to the Examiner's Answer, the Examiner asserts that "unique identifier" is broad enough to encompass information that could include the identity of the contents of the vessel. The Examiner alleges the following:

It is noted that the instant specification on page 9, lines 13-17, refer to "unique" as follows: "Each array 12 has associated with it a unique identifier in the form of a bar code 356 described below. By 'unique' in this sense does not mean the identifier is absolutely unique, but it is sufficiently long so as unlikely to be confused with another identifier on another tray (and is preferably unique as to a particular fabrication station on a given communication channel)." (Examiner's Answer, p. 4)

However, the Examiner is incorrectly equating the description of the array associated bar codes with the unique identifier assigned to each member of the plurality of source vessels. The Appellant submits that the above passage cited by the Examiner has nothing to do with the unique identifier of independent Claims 1, 8, and 54. Claim 1 is representative and reads as follows:

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**Claim 1**

A method of generating an addressable array of biopolymers on a substrate, comprising:

- (a) **providing a plurality of individual vessels each containing a biopolymer wherein said plurality is provided in a defined format;**
- (b) **assigning a unique format identifier to each member of said plurality;**
- (c) obtaining the biopolymers from the plurality of individual identified vessels;
- (d) depositing the biopolymers onto different regions of the substrate so as to fabricate the array;
- (e) **saving in a memory a map of the identity of the vessels to the corresponding regions of the substrate onto which the biopolymers from respective vessels are deposited, in association with a map identifier, wherein said map of the identity of the vessels comprises a unique format identifier of each vessel of said plurality;**
- (f) applying the map identifier to the substrate or a housing carrying the substrate;
- (g) shipping the fabricated array with applied map identifier to a remote location.

As such, the claims clearly provide that each member of a plurality of source vessels is assigned a unique format identifier and that a map of the identity of the vessels is the collection of unique format identifiers assigned to each vessel in the plurality. Contrary to the Examiner's argument, this is not the unique identifier in the format of a bar code associated with an array.

Furthermore, as provided in greater detail in the Appeal Brief, the unique identifier is the unique format identifier assigned to the original vessel prior to fabrication of the array and cannot be interpreted to also include the biopolymer itself.

Additionally, in the Examiner's Answer, the Examiner states the following:

Zeleny et al. describes a map of the reagents deposited in the array which represents a format map of the individual identity of substances with regions on an array which would inherently be in correspondence with the vessels containing the identified substances. (Examiner's Answer, p. 6) (Emphasis added)



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As noted above, the Examiner continues to assert that Zeleny's compositional information is a unique identifier and that Zeleny's map of compositional information is equivalent to the Appellant's unique identifier.

In the Response to Arguments section, the Examiner equates the Appellant's unique Identifier to that of a jar of peanut butter, asserting that "a jar containing peanut butter inside can be reasonably identified as peanut butter." (Examiner's Answer, p. 12)

However, contrary to the Examiner's analogy, knowing a composition does not tell one anything about the identity of the source vessel of the composition.

For example, what if the peanut butter came from one of two or more different sources, e.g., jars? Just because one knows that the jar contains peanut butter, one does not necessarily know from which specific jar the peanut butter was obtained. Accordingly, knowing the composition, e.g., peanut butter, is not a unique identifier of the originating jar of the peanut butter since the peanut butter could have come from any one of two or more different jars.

Similarly, the present application claims a unique identifier which enables one to identify the original source vessel of a biopolymer deposited on the surface of an array.

For example, a customer wishing to fabricate an array may provide a fabrication station with two 96-well plates of biopolymers. Each plate contains identical biopolymers within each well. However, the first plate, e.g. plate 1, contains biopolymers that were recently thawed from a frozen source and the second plate, e.g., plate 2, contains biopolymers that were just purified on the same day. Merely knowing the sequence of a biopolymer on an array does not identify whether the biopolymer came from plate 1 or plate 2.

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For example, each well (member) within each 96-well plate will be assigned a unique format identifier, which is similar to the lot numbers described above, e.g. (tray number, column number, row number). As such, the customer will be able to identify which specific 96-well plate as well as which specific well is the source of the biopolymer on the array.

Accordingly, contrary to the assertion of the Examiner, Zeleny does not in fact provide the unique identifier element of the present claims.

Furthermore, since the Examiner's rejection is premised on Zeleny providing this element and Zeleny does not in fact teach or suggest this element of the claimed invention, Claims 1-14 and 45-54 are not obvious under 35 U.S.C. 103(a) over Hunkapiller in view of Zeleny, Brown, Anderson, Shakib and Balaban and this rejection may be withdrawn.

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**SUMMARY**

The Appellant respectfully requests that the rejection of Claim 54 under 35 U.S.C. § 112, first paragraph and the rejection of Claims 1-14 and 45-54 under 35 U.S.C. 103(a) be reversed, and that the application be remanded to the Examiner with instructions to issue a Notice of Allowance.

Respectfully submitted,  
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